Index for Volume 23 (1974)

COMPILED BY TROY BEST

Acineta, 97
Actinobolina, 101, 122, 130
Aepyornithidae, 83, 84, 86
Aepyornithiformes, 84
Aerobacter aerogenes, 482
Aeshna, 48
Aeshnidae, 48
Alasmidonta marginata, 169
Allantosoma, 101
Ammospermophilus, 18, 19
  leucurus, 14, 16, 19
Anabantidae, 191
Analysis,
  factor, 202–218, 302–309
  nonmetric, 355–362
Analysis of dimorphism in natural populations with consideration of methodological and epistemological problems, John W. Senner and Robert R. Sokal, 363–386
Anax, 48
Ancistrocoma, 101
Ancistrum, 130
Anderson, D. T., Embryology and phylogeny in annelids and arthropods (rev.), 150–151
Anderson, Sydney, Some suggested concepts for improving taxonomic dialogue, 58–70
Andersson, Hugo, see Lindroth, Carl H., —
Anodonta imbecilis, 169, 183
Anolis, 235, 468, 471, 474
  aeneus, 388–392, 394–397
  blanquillanus, 389–393, 395
  bonairensis, 389–393, 395
  extremus, 389–392, 395, 397
  griseus, 388–392, 395–397
  luciae, 389, 391–393, 395–397
  richardi, 388–392, 395–397
  roquet, 387–399
  trinitatis, 388–392, 395–397
Anolis lizards of the eastern Caribbean: A case study in evolution. I. Genetic relationships, phylogeny, and colonization sequence of the *roquet* group, Suh Yung Yang, Michael Soulé, and George C. Gorman, 387–399
Anonymous, Trends, priorities, and needs in systematic and evolutionary biology, 416–439
Anopheles maculipennis, 244, 380, 507
Anoplophrya, 101
Anthracophausia, 324, 330
Anthracophausiidae, 324, 330
Anthrapalaemon, 323, 324
Aphelinidae, 242
Aphididae, 242
Aphrodita, 502, 503
Aphytis mytilaspidis, 242
Aplodinotus grunniens, 205, 207
Aplodontia, 18
  rufa, 12, 23
Apokinetal, 130
Apterygidae, 83, 84
Apterygiformes, 84
Arachnids, 219–225
Arapaima, 194
Argia, 44, 45, 47, 48
  emma, 43, 44, 46
  lugens, 43, 45
  vivida, 43, 45
Arkansas, 1–11
Aspidisca, 109
Astyanax mexicanus, 471, 474
Astylozoon, 101
Atchley, William R., and Jenny Cheney, Morphometric differentiation in the Viatica group of morabine grasshoppers (Orthoptera, Eumastacidae), 400–415
Atherinidae, 205
Atyidae, 275
Aves, 85, 257–264
Avise, John C., Michael H. Smith, Robert K. Selander, Timothy E. Lawlor, and Paul R. Ramsey, Biochemical polymorphism and systematics in the genus *Peromyscus*. V. Insular and mainland species of the subgenus *Haplomylomys*, 226–238
Avise, John C., Systematic value of electrophoretic data, 465–481

Bagridae, 191
Baker, H. G., review by, 569
Baker, Robert J., see Davis, Brent L., and —
Balaena, 253
Balantidium, 109
Bass,
  largemouth, 205, 208, 209, 214, 217
  spotted, 205
  white, 205
Bathynella, 158
Bathynellacea, 157–164
Bathynellidae, 157–164
Bats, 26–39
Beatty, J. A., and R. E. Blackwelder, Names of invertebrate phyla, 545–547
Belotelson, 329
  magister, 327, 328
Belotelsonidae, 324, 330
Benazzi, Mario, A new karyotype in the American fresh-water planarian *Dugesia dorotocephala*, 490–492
Berger, Jacques, see Gates, Michael A., —

Index for Volume 23 (1974)

COMPILED BY TROY BEST

Acineta, 97
Actinobolina, 101, 122, 130
Aepyornithidae, 83, 84, 86
Aepyornithiformes, 84
Aerobacter aerogenes, 482
Aeshna, 48
Aeshnidae, 48
Alasmidonta marginata, 169
Allantosoma, 101
Ammospermophilus, 18, 19
  leucurus, 14, 16, 19
Anabantidae, 191
Analysis,
  factor, 202–218, 302–309
  nonmetric, 355–362
Analysis of dimorphism in natural populations with consideration of methodological and epistemological problems, John W. Senner and Robert R. Sokal, 363–386
Anax, 48
Ancistrocoma, 101
Ancistrum, 130
Anderson, D. T., Embryology and phylogeny in annelids and arthropods (rev.), 150–151
Anderson, Sydney, Some suggested concepts for improving taxonomic dialogue, 58–70
Andersson, Hugo, see Lindroth, Carl H., —
Anodonta imbecilis, 169, 183
Anolis, 235, 468, 471, 474
  aeneus, 388–392, 394–397
  blanquillanus, 389–393, 395
  bonairensis, 389–393, 395
  extremus, 389–392, 395, 397
  griseus, 388–392, 395–397
  luciae, 389, 391–393, 395–397
  richardi, 388–392, 395–397
  roquet, 387–399
  trinitatis, 388–392, 395–397
Anolis lizards of the eastern Caribbean: A case study in evolution. I. Genetic relationships, phylogeny, and colonization sequence of the *roquet* group, Suh Yung Yang, Michael Soulé, and George C. Gorman, 387–399
Anonymous, Trends, priorities, and needs in systematic and evolutionary biology, 416–439
Anopheles maculipennis, 244, 380, 507
Anoplophrya, 101
Anthracophausia, 324, 330
Anthracophausiidae, 324, 330
Anthrapalaemon, 323, 324
Aphelinidae, 242
Aphididae, 242
Aphrodita, 502, 503
Aphytis mytilaspidis, 242
Aplodinotus grunniens, 205, 207
Aplodontia, 18
  rufa, 12, 23
Apokinetal, 130
Apterygidae, 83, 84
Apterygiformes, 84
Arachnids, 219–225
Arapaima, 194
Argia, 44, 45, 47, 48
  emma, 43, 44, 46
  lugens, 43, 45
  vivida, 43, 45
Arkansas, 1–11
Aspidisca, 109
Astyanax mexicanus, 471, 474
Astylozoon, 101
Atchley, William R., and Jenny Cheney, Morphometric differentiation in the Viatica group of morabine grasshoppers (Orthoptera, Eumastacidae), 400–415
Atherinidae, 205
Atyidae, 275
Aves, 85, 257–264
Avise, John C., Michael H. Smith, Robert K. Selander, Timothy E. Lawlor, and Paul R. Ramsey, Biochemical polymorphism and systematics in the genus *Peromyscus*. V. Insular and mainland species of the subgenus *Haplomylomys*, 226–238
Avise, John C., Systematic value of electrophoretic data, 465–481

Bagridae, 191
Baker, H. G., review by, 569
Baker, Robert J., see Davis, Brent L., and —
Balaena, 253
Balantidium, 109
Bass,
  largemouth, 205, 208, 209, 214, 217
  spotted, 205
  white, 205
Bathynella, 158
Bathynellacea, 157–164
Bathynellidae, 157–164
Bats, 26–39
Beatty, J. A., and R. E. Blackwelder, Names of invertebrate phyla, 545–547
Belotelson, 329
  magister, 327, 328
Belotelsonidae, 324, 330
Benazzi, Mario, A new karyotype in the American fresh-water planarian *Dugesia dorotocephala*, 490–492
Berger, Jacques, see Gates, Michael A., —

Biochemical polymorphism and systematics in the genus *Peromyscus*. V. Insular and mainland species of the subgenus *Haplomylomys*, John C. Avise, Michael H. Smith, Robert K. Selander, Timothy E. Lawlor, and Paul R. Ramsey, 226–238
Biogeography, 165–188, 265–287
Biological species, 536–544
Birds, 85, 257–264
  ratite, 82–84
Black, Robert, see Stevenson, Michael M., —
Blackwelder, R. E., see Beatty, J. A., and —
Blarina brevicauda, 36
Bluegill, 205
Bödvarsson, Högni, see Lindroth, Carl H., —
Bonde, Niels, review by, 562–569
Boveria, 130
Bowmaniella, 329
Boyeria, 48
Briggs, John C., Marine zoogeography (rev.), 460–464
Briggs, John C., Operation of zoogeographic barriers, 248–256
Brooklynella, 118, 122, 130
Bruchidae, 244
Bucco-kinetal, 130
Bullhead,
  black, 205
  yellow, 205
Bursaria, 103

Callosciurus, 12, 13, 18–21
  finlaysoni, 14, 16
  flavimanus, 14, 16, 20, 21
  notatus, 14, 16, 21
  prevosti, 14, 16, 20, 21
Callospermophilus, see *Spermophilus*
Calopterygidae, 41, 48
Calopteryx, 41, 48
Camallanidae, 189–201
Camallanides, 190, 191, 195, 196, 199, 200
  hemidentata, 191
  prashadi, 191
Camallanus, 190–197, 199, 200
  americanus, 193
  ancylodirus, 192
  chorinemi, 190
  cotti, 192
  intermedius, 192
  lacustris, 192, 193, 196, 198, 199
  marinus, 190
  melanocephalus, 192
  microcephalus, 192, 193, 197
  nigrescens, 192
  octorugatus, 192
  oxycephalus, 192, 199
  papillifer, 192
  scabrae, 193
  surmai, 190
  tridentatus, 194
  trispinosus, 193
  truncatus, 192, 193, 197
Cambarus, 326
Campostoma anomalum, 205, 211, 215
Canidae, 8
Canis, 1–11
  familiaris, 1
  latrans, 1, 2
  lupus, 1–3, 8
  lypus, 3
  niger, 1
  rufus, 1, 2, 8
Caprimulgidae, 270
Carlquist, Sherwin, Island biology (rev.), 460–464
Carpiodes carpio, 205, 209
Carpsucker,
  river, 205
Casasia clusiifolia, 521
Casuariidae, 83, 84, 86
Catfish,
  channel, 205
  flathead, 205
Catostomidae, 205
Celithemis, 48
Centers of origin, 248–256, 265–287
Centers of origin and related concepts, Leon Croizat, Gareth Nelson, and Donn Eric Rosen, 265–287
Centrarchidae, 205
Cepaea, 384
Cerion, 518–535
  abacoense, 520, 521, 527–529, 532
  alberta, 519
  bendalli, 520–522, 524, 525, 527–534
  calcareum, 519
  chrysaloides, 520
  eximium, 519
  glans, 519, 521
  johnsoni, 519
  lucayanorum, 520
  malonei, 519
  maynardi, 520
  oweni, 520
  pauli, 519
  regium, 519
  turnerae, 519
  uva, 534
Cetoniidae, 273
Chaetozone, 502
Chandler, Leland, see McCafferty, W. P., and —
Changing world of ciliate systematics: Historical analysis of past efforts and a newly proposed phylogenetic scheme of classification for the protistan phylum Ciliophora, the, John O. Corliss, 91–138
Character concept, 513–517
Cheney, Jenny, see Atchley, William R., and —
Cheng, Thomas C., General parasitology (rev.), 148–149
Chilibathynella-group, 161–163

Chilodonella, 101
Chironomus, 28
Chiroptera, 26–39
Chlamydonella, 109
Chorion, 507–512
Chromosomes, 333–342, 343–354, 490–492
Chub,
  flathead, 205
  silver, 205
  speckled, 205
Ciliate, 91–138
Ciliophora, 91–138
Citellus, 13
Cladism, 58–70, 446–451
Cladism or Gradism?: A reply to Ernst Mayr, Donn Eric Rosen, 446–451
Cladistics, 305–322, 513–517
Clariidae, 191
Classification, 58–70, 71–90, 91–138, 239–247, 452–458
Clevelandella, 103
Clupeidae, 205
Codonella, 103
Coenagrion, 48
Coenagrionidae, 40–49
Coil, William H., review by, 148–149
Coleoptera, 53, 244
Coleps, 101
Colonization, 387–399
Colpidium, 101, 109
Colpochila, 53, 54
Colpoda, 101
Columba, 268, 271, 272
  albilinea, 272
  araucana, 272
  bollii, 272
  caribaea, 272
  fasciata, 272
  junoniae, 272
  palumbus, 272
  trocaz, 272
  unicincta, 272
Columbidae, 272
Computer program for generating identification keys, a flexible, M. J. Dallwitz, 50–57
Concepts for improving taxonomic dialogue, some suggested, Sydney Anderson, 58–70
Conchophthirus, 118, 122
Condylostoma, 109
Contacts between ranges of different chromosome forms of the *Thomomys talpoides* complex (Rodentia: Geomyidae), four, Charles S. Thaeler, Jr., 343–354
Convergences between Late Paleozoic and modern caridoid Malacostraca, Frederick R. Schram, 323–332
Cook, Robert Edward, Origin of the highland avifauna of southern Venezuela, 257–264
Cordulegaster, 48
Cordulegastridae, 48
Corduliidae, 48
Corliss, John O., The changing world of ciliate systematics: Historical analysis of past efforts and a newly proposed phylogenetic scheme of classification for the protistan phylum Ciliophora, 91–138
Corvus
  cornix, 242
  corone, 242
Cothurnia, 101
Coyote, 1–11
Cracraft, Joel, Phylogenetic models and classification, 71–90
Cracraft, Joel, review by, 143–146
Crangopsis, 323, 324
Crappie,
  black, 205
  white, 205
Cricetidae, 333–342
Crites, John L., see Stromberg, Paul C., and —
Croizat, Leon, Gareth Nelson, and Donn Eric Rosen, Centers of origin and related concepts, 265–287
Croizat, Leon, Space, time, form: The biological synthesis (rev.), 288–290
Crovello, T. J., review by, 560
Crowson, R. A., Classification and biology (rev.), 141–143
Crustacea, 157–164
Cteniobathynella-group, 162, 163
Culicidae, 244
Cyathodinium, 101, 121, 130
Cyclidium, 101
Cynipidae, 242
Cynomys, 18, 19
  gunnisoni, 14, 16, 19
  ludovicianus, 14, 16, 19
Cynota subserialis, 224
Cyprinidae, 191, 205
Cyprinodon, 474
  rubrofluviatilis, 205, 213, 215, 217
Cyprinodontidae, 205
Cytotaxonomy, 26–39

Dace,
  southern redbelly, 205
Dallwitz, M. J., A flexible computer program for generating identification keys, 50–57
Damselflies, 40–49
Darter,
  orangethroat, 205
  slenderhead, 205
Darwin-Hennig classification: A reply to Ernst Mayr, Gareth Nelson, 452–458
Davis, Brent L., and Robert J. Baker, Morphometrics, evolution, and cytotaxonomy of mainland bats of the genus *Macrotus* (Chiroptera: Phyllostomatidae), 26–39
Delphinapterus, 253
Deltopylum, 109
Dendrocometes, 101
Dendrograms, 91–138

Denotations of some comparative systematic terminology, W. P. McCafferty and Leland Chandler, 139–140
Desmodus, 28
Determination,
species, 239–247
Dexiotricha, 109
Didinium, 97, 109
Didymops, 48
Differentiation,
morphometric, 400–415
Dileptus, 101
Dimorphism, 363–386
Dinophilidae, 496, 497
Dinornithidae, 83, 84
Diophrys, 97
Diplichnites govenderi, 326
Dipodomys, 471, 472, 475
Diptera, 244
Dispersal, 248–256
Distribution, 265–287
fish, 202–218
pocket gopher, 343–354
Distribution of freshwater mussels: Coastal rivers as biogeographic islands, J. John Sepkoski, Jr. and Michael A. Rex, 165–188
Diversity models, 323–332
Dog, 1–11
Dominance and zoogeography of southern continents, D. R. Horton, 440–445
Dorocordulia, 48
Dorosoma cepedianum, 205, 209
Doyen, John T., and C. N. Slobodchikoff, An operational approach to species classification, 239–247
Doyen, John T., Systematics of the genus *Coelocnemis* (Coleoptera: Tenebrionidae) (rev.), 560
Dromiceidae, 83, 84
Dromogomphus, 48
Drosophila, 41, 219, 223, 229, 243, 468, 471–473, 507–512
equinoxialis, 473
heedi, 507–509, 511
heteroneura, 507–511
hipectinata, 474
kambysellisi, 507–509, 511
melanogaster, 223, 507
mesophragmatica, 474
mimica, 507–509, 511
mullerian, 445
obscura, 474
paulistorum, 473, 474
pavlovskiana, 473
persimalis, 223, 381
pseudoobscura, 223, 235, 381, 424, 471
repleta, 445
silvarentis, 507–509, 511
silvestris, 507–511
willistoni, 470, 472, 473
Drum,
freshwater, 205
Dugesia dorotocephala, 490–492
Dunn, James E., see Gipson, Philip S., —

Eigenbrod, Renate, review by, 291–296
Eimeria, 101
Ekman, Paul (Ed.), Darwin and facial expression: A century of research in review (rev.), 562
Electrophoresis, 226–238, 465–481
Elliptio fraterna, 169
Enallagma, 44, 45, 48
boreale, 43–46
carunculatum, 43–46
cyathigerum, 43–46
praevarum, 43–45
Entodinium, 101
Eocarididae, 324
Epallage, 41
Epallagidae, 41
Epidinium, 97
Epitheca, 48
Equidae, 449
Erebia
cassioides, 41
nivalis, 41
Erpetogomphus, 48
Essoidia epiceron, 328, 329
Essoidiidae, 324, 330
Etheostoma, 477
spectabile, 205, 211
Eumastacidae, 400–415
Eunice, 501, 503
Euplotes, 103, 109
Eutamias, 18
dorsalis, 14, 16, 19
minimus, 14, 16, 19
sibiricus, 19
Evolution, 265–287
morphological, 305–322
Eyles, A. C., Monograph of *Dieuches* Dohrn (Heteroptera: Lygaeidae) (rev.), 149–150

Fabrea, 103
Factor analysis of fish distribution patterns in western and central Oklahoma, Michael M. Stevenson, Gary D. Schnell, and Robert Black, 202–218
Farris, James S., Formal definitions of paraphyly and polyphyly, 548–554
Fauchald, Kristian, Polychaete phylogeny: A problem in protostome evolution, 493–506
Fish distribution, 202–218
Folliculina, 103
Formal definitions of paraphyly and polyphyly, James S. Farris, 548–554
Fowler, Dona J., and Clarence J. Goodnight, Physiological populations of the arachnid, *Leiobunum longipes* (Opiliones: Phalangiidae), 219–225
Freshwater mussels, 165–188
Frontonia, 118

Frontoniidae, 101
Funambulus, 12, 18–21
palmarum, 14, 16
Fundulus
kansae, 205, 209
notatus, 205, 207, 214

Gaffney, Eugene S., review by, 299
Galaxiidae, 266
Gambusia affinis, 205, 209
Gar,
longnose, 205
spotted, 205
Gastrosaccus, 329
Gates, Michael A., Elizabeth E. Powelson, and Jacques Berger, Syngenic ascertainment in *Paramecium aurelia*, 482–489
Gecarcinidae, 275
Gecarcinus, 268
lagostoma, 275
Genetic relationships, 355–362, 387–399
Genetics, 465–481
Genetics and morphometrics of *Cerion* at Pongo Carpet: A new systematic approach to this enigmatic land snail, 518–535
Genoways, Hugh H., Systematics and evolutionary relationships of spiny pocket mice, genus *Liomys* (rev.), 560
Geomyidae, 343–354
Geomys
arenarius, 235
personatus, 235
tropicalis, 235
Geotria australis, 268
Ghiselin, Michael, review by, 150–151, 562
Ghiselin, Michael T., A radical solution to the species problem, 536–544
Ghiselin, Michael T., The economy of nature and the evolution of sex (rev.), 560–562
Gipson, Philip S., John A. Sealander, and James E. Dunn, The taxonomic status of wild *Canis* in Arkansas, 1–11
Glaucoma, 109
Glaucomys, 12, 18
sabrinus, 14, 16, 22
volans, 14, 16, 22
Gochfeld, Michael, Terms for highly similar species, 445–446
Goldeye, 205, 212, 213, 215, 217
Goliathus
aureosparsus, 273
fornasini, 273
higginsi, 273
russus, 273
Gomphaeschna, 48
Gomphidae, 42, 48
Gomphoides, 48
Gomphus, 48
Goodman, Morris, see Hight, Mary Etta, —
Goodnight, Clarence J., see Fowler, Dona J., and —
Gorilla, 455–457
Gorman, George C., see Yang, Suh Yung, —
Gosline, William A., Publication problems in systematic zoology, 547–548
Gould, Stephen Jay, David S. Woodruff, and Joseph P. Martin, Genetics and morphometrics of *Cerion* at Pongo Carpet: A new systematic approach to this enigmatic land snail, 518–535
Gould, Stephen Jay, see Raup, David M., and —
Grasshoppers,
morabine, 400–415
Greenwood, P. H., R. S. Miles, and C. Patterson (Eds.), Interrelationships of fishes (rev.), 562–569
Griffiths, G. C. D., The phylogenetic classification of Diptera Cyclorrhapha, with special reference to the structure of the male postabdomen (rev.), 297–298
Griffiths, Graham C. D., review by, 291–296
Gruber, Howard E., Darwin on man: A psychological study of scientific creativity (rev.), 562
Guttman, Louis, see Guttman, Ruth, and —
Guttman, Ruth, and Louis Guttman, Nonmetric analysis of genetic relationships among inbred strains of mice, 355–362
Gymnodinioides, 101

Hagenius, 42
Halteria, 103
Hand, Cadet, review by, 296–297
Haplomylomys, 226–238
Hawaii, 507–512
Helocordulia, 48
Hemispeira, 101
Hetaerina, 47, 48
americana, 47
titia, 47
Heterocinetopsis, 118
Heteropneustes fossilis, 191
Heteroptera, 149–150
Hexabathynella, 159, 160, 162
halophila, 158
Hight, Mary Etta, Morris Goodman, and William Prychodko, Immunological studies of the Sciuridae, 12–25
Hiodon alosoides, 205, 213, 214
Hiodontidae, 205
Hirundinidae, 270
Histiobalantium, 97
Historical biogeography: An alternative formalization, Gareth Nelson, 555–558
Holophrya, 101
Holosticha, 101
Homarus, 326
americanus, 325
Hominidae, 455–457
Homo, 85, 455–457
sapiens, 537, 539
Homoptera, 242
Horton, D. R., Dominance and zoogeography of southern continents, 440–445

Huia, 244
Hull, David L., review by, 560–562
Hybognathus
  nuchalis, 205, 214
  placitus, 205, 213, 215
Hybopsis
  aestivalis, 205, 213, 215
  gracilis, 205, 214
  storeiana, 205, 209
Hybridization,
  Canis, 1–11
Hymenoptera, 242
Hypotrichidium, 103
Hyracotherium, 449

Ictaluridae, 205
Ictalurus
  melas, 205, 209
  natalis, 205, 207
  punctatus, 205, 209
Iguanidae, 387
Immunological studies of the Sciuridae, Mary Etta Hight, Morris Goodman, and William Prychodko, 12–25
Inbred mice, 355–362
Insecta, 242–244, 400–415
Invertebrate phyla, names of, J. A. Beatty and R. E. Blackwelder, 545–547
Iomys, 12, 18, 22
  horsfieldi, 14, 16
Ischnura, 42, 45, 47, 48
  cervula, 43
  denticollis, 43, 45
  elegans, 46
  perparva, 43, 46
  pumilio, 46
Isolation,
  reproductive, 40–49

Jardine, N., and R. Sibson, Mathematical taxonomy (rev.), 146–148
Jeffrey, Charles, Biological nomenclature (rev.), 560
Jyngidae, 270

Kambysellis, Michael P., Ultrastructure of the chorion in very closely related *Drosophila* species endemic to Hawaii, 507–512
Karyotype,
  Peromyscus, 333–342
  pocket gopher, 343–354
  planarian, 490–492
Karyotype in the American fresh-water planarian *Dugesia dorotocephala*, a new, Mario Benazzi, 490–492
Karyotypic variation in *Peromyscus boylii* (Rodentia: Cricetidae) from Mexico and corresponding taxonomic implications, David J. Schmidly and Gilbert L. Schroeter, 333–342
Keys, 50–57
Killifish,
  plains, 205

Labidesthes sicculus, 205, 207
Lacerta melisellensis, 394
Lacrymaria, 101
Ladona, 48
Laetmonice, 503
Lamotte, M. (Ed.), Le polymorphisme dans le règne animal (rev.), 559–560
Lampsilis anodontoides, 183
Lanthus, 48
Lawlor, Timothy E., see Avise, John C., —
Leiobunum longipes, 219–225
Lepisosteidae, 205
Lepisosteus
  oculatus, 205, 207
  osseus, 205, 207
Lepomis, 471, 473–475
  auritus, 467, 472
  cyanellus, 205, 209, 211, 467, 472, 474
  gibbosus, 467, 472
  gulosus, 205, 207, 209, 467, 472, 474
  humilis, 205, 209, 467, 472, 474
  macrochirus, 205, 209, 467, 474
  marginatus, 467, 472, 474
  megalotis, 205, 209, 216, 467, 472, 474
  microlophus, 205, 209, 213, 216, 467, 472
  punctatus, 467, 472
LeQuesne, Walter J., The uniquely evolved character concept and its cladistic application, 513–517
Lestes, 42, 46, 48
Lestidae, 42, 48
Leucorrhinia, 42, 48
Libellula, 48
Libellulidae, 42, 48
Licnophora, 103
Ligumia nasuta, 169
Lindroth, Carl H., Hugo Andersson, Högni Bödvarsson, and Sigurdur H. Richter, Surtsey, Iceland. The development of a new fauna, 1963–1970. Terrestrial invertebrates (rev.), 460–464
Litogaster turnbullensis, 329
Lobster,
  American, 325
Logperch, 205
Löther, Rolf, Die Beherrschung der Mannigfaltigkeit (rev.), 291–296
Loxodes
  mangus, 125
  rostrum, 125
  striatus, 125
Lumbrineris, 502
Lygaeidae, 149–150

MacArthur, Robert H., Geographical ecology. Patterns in the distribution of species (rev.), 460–464
Macromia, 48

Macromiidae, 48
Macrotus, 26–39
  californicus, 34, 35, 37
  waterhousii, 26, 30, 32–35, 38
Madtom,
  freckled, 205
Magelona, 500
Malacostraca, 323–332
Mamayocaris jaskoskii, 325, 327
Maniola jurtina, 383
Martin, Joseph P., see Gould, Stephen Jay, —
Mayr, Ernst, 446–451, 452–458
Mayr, Ernst, review by, 559–560
McAlpine, J. F., review by, 297–298
McCafferty, W. P., and Leland Chandler, Denotations of some comparative systematic terminology, 139–140
Menetes, 12, 18–21
  berdmorei, 14, 16
Mesosciurus, 20
Mesozoic intercontinental relationships as evidenced by bathynellid Crustacea (Syncarida: Malacostraca), Horst Kurt Schimke, 157–164
Metacynortoides obscura, 224
Metopus, 101, 103
Mice,
  inbred, 355–362
Micronycteris hirsuta, 26
Micropogon undulatus, 193
Micropterus
  punctulatus, 205, 211
  salmoides, 205, 209
Miles, R. S., see Greenwood, P. H., —
Minnow,
  bluntnose, 205
  bullhead, 205
  plains, 205
  silvery, 205
  suckermouth, 205
Mirounga angustirostris, 235
Misumenops
  californicus, 41
  gabrielensis, 41
  lepidus, 41
  rothi, 41
Mochokidae, 191
Models,
  diversity, 323–332
  phylogenetic, 71–90
Monodon, 253
Morone chrysops, 205, 213, 214
Morphological evolution, 305–322
Morphometric differentiation in the Viatica group of morabine grasshoppers (Orthoptera, Eumastacidae), William R. Atchley and Jenny Cheney, 400–415
Morphometrics, evolution, and cytotaxonomy of mainland bats of the genus *Macrotus* (Chiroptera: Phyllostomatidae), Brent L. Davis and Robert J. Baker, 26–39
Mosquitofish, 205
Moss, W. Wayne, review by, 146–148
Moxostoma erythrurum, 205, 211
Müller, P., The dispersal centres of terrestrial vertebrates in the Neotropical Realm, 460–464
Multivariate statistics, 400–415
Mus, 468, 471
Mussels,
  freshwater, 165–188
Mylestoma, 103
Myoporum, 511
Myxicola, 502

Narwhal, 253
Natrix, 192, 197
Nehalennia, 48
Nelson, Gareth, Darwin-Hennig classification: A reply to Ernst Mayr, 452–458
Nelson, Gareth, Historical biogeography: An alternative formalization, 555–558
Nelson, Gareth, review by, 460–464
Nelson, Gareth, see Croizat, Leon, —
Nematoda, 189–201
Neotoma, 36
Nerillidae, 496
Neurocordulia, 48
Neurosecretion, 219–225
Nonmetric analysis of genetic relationships among inbred strains of mice, Ruth Guttman and Louis Guttman, 355–362
Notemigonus crysoleucas, 205, 209
Notobathynella, 159, 163
  williamsi, 158
Notocarididae, 324, 326, 327, 330
Notocaris tapscotti, 326, 328
Notropis
  atherinoides, 205, 209
  bairdi, 205, 213
  boops, 205, 211
  buchanani, 205, 207
  chrysocephalus, 205, 211
  girardi, 205, 211, 213, 215
  lutrensis, 203, 209
  potteri, 205, 207, 213
  stramineus, 205, 209, 215
  venustus, 205, 207, 211
  volucellus, 205, 211
  whipplei, 205, 214
Noturus nocturnus, 205, 207
Numerical taxonomy, 239–247, 363, 386, 427, 428
Nyctotherus, 103

Obliquaria reflexa, 169
Odonata, 40–49
Oklahoma, 202–218
Operation of zoogeographic barriers, John C. Briggs, 248–256
Operational approach to species classification, an, John T. Doyen and C. N. Slobodchikoff, 239–247
Ophigomphus, 48

Ophiocephalidae, 191
Ophiocephalus striatus, 191
Ophrydium, 97
Ophryoscolex, 101
Opiliones, 219–225
Origin of the highland avifauna of southern Venezuela, Robert Edward Cook, 257–264
Oxytricha, 101
Oxytrichidae, 101

Palaeognathiformes, 83, 84
Palaeomysis, 324
Palaeopalaemon
iowensis, 329
newberryi, 324, 329
Palaeopalaemonidae, 324, 329, 330
Pan, 455–457
Pantala, 48
Panulirus, 326
argus, 325
Parabathynellidae, 157–164
Paracamallanus, 190, 191, 195, 196, 199, 200
sweeti, 196, 198
Paraisotricha, 122
Parakinetal, 130
Paramecium, 101, 109, 118
aurelia, 482, 489
Parapenaeus longirostris, 325, 326
Paraphyly, 548–554
Parasitology, 189–201
Patterson, C., see Greenwood, P. H., —
Paulson, Dennis R., Reproductive isolation in damselflies, 40–49
Peachella strongi, 328
Pemphigus populitransversus, 363–386
Percichthyidae, 205
Percidae, 205
Percina, 477
caprodes, 205, 213, 214
phoxocephala, 205, 207
Perognathus, 36
Peromyscus, 226–238, 472, 475–477
attwateri, 476
boylii, 226, 233, 333–342, 476
californicus, 227, 228, 233–235, 476
caniceps, 228, 232–234, 236, 476
crinitus, 226
dickeyi, 228, 231, 233, 476
eremicus, 226–236, 471, 476
eva, 228, 231, 233, 234, 476
evides, 333, 337, 338, 340, 341
floridanus, 227, 228, 233, 476
gossypinus, 227, 228, 231, 233, 476
guardia, 228, 231–234, 476
interparietalis, 228, 231–234, 476
leucopus, 227, 228, 231, 233, 476
maniculatus, 226, 233, 236, 340, 476
melanophrys, 340
merriami, 226–228, 231–236, 476
oaxacensis, 333, 337, 338, 340, 341
pectoralis, 476
polionotus, 227, 228, 230, 233, 235, 236, 340, 476
sejugis, 227, 228, 233, 236, 476
stephani, 228, 233, 234, 236, 476
Petaurista, 12, 18, 22
petaurista, 14, 16
Petauristidae, 13
Petinomys, 12, 18, 22
setosus, 14, 16
Phalangiidae, 219–225
Phallus impudicus, 537
Phenacobius mirabilis, 205, 209
Philosophy, 536–544
Photoperiod, 219–225
Phoxinus erythrogaster, 205, 211
Phyllostomatidae, 26–39
Phylogenetic models and classification, Joel Cracraft, 71–90
Phylogeny, 58–70, 71–90, 91–138, 387–399
polychaete, 493–506
Physiological populations of the arachnid, *Leiobunum longipes* (Opiliones: Phalangiidae), Dona J. Fowler and Clarence J. Goodnight, 219–225
Picidae, 270
Pimephales
notatus, 205, 207
vigilax, 205, 209
Pipistrellus
hesperus, 34
subflavus, 34
Pisonia, 511
Planarian, 490–492
Platycnemididae, 43
Platycnemis, 43
dealbata, 46
pennipes, 46
Platycola, 101
Plethodon, 268, 269
dunni, 269
vehiculum, 269
Pleuronema, 130
Podocnemis, 194
Podophrya, 101
Poeciliidae, 205
Polycelis nigra, 492
Polychaete phylogeny: A problem in protostome evolution, Kristian Fauchald, 493–506
Polygordiidae, 496, 497
Polyphyly, 548–554
Pomoxis
annularis, 205, 209
nigromaculatus, 205, 211
Pongo, 456–458
Populations, 1–11, 26–39, 219–225, 226–238, 333–342, 343–354, 363–386, 387–399, 400–415, 518–535
Populus deltoides, 363
Powelson, Elizabeth E., see Gates, Michael A., —
Procamallanus, 190–193, 195–197, 199, 200
annulatus, 190
laeviconchus, 191

Progomphus, 48
Prorodon ovalis, 124
Protein variation, 226–238, 465–481
Protodrilidae, 496, 497
Protostomes, 493–506
Protozoa, 91–138
Prychodko, William, see Hight, Mary Etta, —
Pseudocohnilembus, 127
Pseudogalathea, 324
Pseudomicrothorax, 101, 121, 129
Pteromys, 12, 18, 22
  momonga, 14, 16
Publication problems in systematic zoology, William A. Gosline, 547–548
Puerulus, 326
  sewelli, 325
Pupfish,
  Red River, 205, 210, 211, 213, 215, 217
Pygocephalidae, 324, 326, 330
Pygocephalus, 324
  cooperi, 323
Pylodictis olivaris, 205, 207, 211

Radical solution to the species problem, a, Michael T. Ghiselin, 536–544
Radiophrya, 97
Ramsey, Paul R., see Avise, John C., —
Rana, 192, 193, 440
Ratufa, 12, 18, 19, 21, 22
  bicolor, 14, 16
  indica, 14, 16
Raup, David M., and Stephen Jay Gould, Stochastic simulation and evolution of morphology—towards a nomothetic paleontology, 305–322
Redhorse,
  golden, 205
Relationships,
  genetic, 355–362, 387–399
Reproductive isolation in damselflies, Dennis R. Paulson, 40–49
Rex, Michael A., see Sepkoski, J. John, Jr., and —
Rheidae, 83, 84
Rhogeëssa, 34
Richter, Sigurdur H., see Lindroth, Carl H., —
Rosen, Donn Eric, Cladism or Gradism?: A reply to Ernst Mayr, 446–451
Rosen, Donn E., review by, 141–143, 288–290
Rosen, Donn Eric, see Croizat, Leon, —
Ruse, Michael, The philosophy of biology (rev.), 143–146

Sapindus saponaria, 511
Saprodinium, 103
Scarabaeidae, 53
Sceloporus, 471
Schmidly, David J., and Gilbert L. Schroeter, Karyotypic variation in *Peromyscus boylii* (Rodentia: Cricetidae) from Mexico and corresponding taxonomic implications, 333–342
Schmidt, Hajo, Prodromus zu einer monographie der Mediterranen Aktinien (rev.), 296–297
Schminke, Horst Kurt, Mesozoic intercontinental relationships as evidenced by bathynellid Crustacea (Syncarida: Malacostraca), 157–164
Schnell, Gary D., see Stevenson, Michael M., —
Schram, Frederick R., Convergences between Late Paleozoic and modern caridoid Malacostraca, 323–332
Schroeter, Gilbert L., see Schmidly, David J., and —
Sciaenidae, 205
Sciuridae, 12–25, 205
Sciurus, 12, 13, 18, 20, 22
  carolinensis, 14, 16, 20
  granatensis, 14, 16, 20
  niger, 14, 16, 20
  vulgaris, 14, 16, 20
Scyphidia, 130
Sealander, John A., see Gipson, Philip S., —
Selander, Robert K., see Avise, John C., —
Senner, John W., and Robert R. Sokal, Analysis of dimorphism in natural populations with consideration of methodological and epistemological problems, 363–386
Sepkoski, J. John, Jr., and Michael A. Rex, Distribution of freshwater mussels: Coastal rivers as biogeographic islands, 165–188
Serotonin, 219–225
Shad,
  gizzard, 205
Shiner,
  Arkansas River, 205
  bigeye, 205
  blacktail, 205
  chub, 205
  emerald, 205
  ghost, 205, 207, 214
  golden, 205
  mimic, 205
  Red River, 205
  sand, 205
  steelcolor, 205, 212, 214, 215
  striped, 205, 208, 209, 211, 214, 217
Sibson, R., see Jardine, N., and —
Sigmodon, 471, 472
Siluridae, 191
Silverside,
  brook, 205
Simulation, 305–322
Slobodchikoff, C. N., see Doyen, John T., and —
Smith, Michael H., see Avise, John C., —
Sokal, Robert R., see Senner, John W., and —
Somatochlora, 48
Soulé, Michael, see Yang, Suh Yung, —
Spalax ehrenbergi, 445
Spathidium, 101
Specialization, body volume, and geographic distribution of Camallanidae (Nematoda), Paul C. Stromberg and John L. Crites, 189–201
Speciation,
  canid, 1–11

pocket gopher, 343–354
stasipatric, 400–415
Species, 139–140, 445, 446
biological, 536–544
determination, 239–247
Spermophilus, 12, 13, 18, 19
elegans, 352
lateralis, 14, 16, 19
mexicanus, 14, 16
richardsoni, 14, 16, 19, 352
tridecemlineatus, 14, 16, 19
Spiller, Judith, review by, 459–460
Spirocamallanus, 190–197, 199, 200
cearensis, 196
fulvidraconis, 192
iheringi, 194
murrayensis, 196
pereira, 193
spiralis, 191, 193
Spirochona, 97
Spirostomum, 97
Squirrels, 12–25
Stahl, Barbara J., Vertebrate history: Problems in evolution (rev.), 299
Starr, Mortimer P., review by, 560
Statistics,
multivariate, 400–415
Stentor, 97
Stephanopogon colpoda, 124
Stevenson, Michael M., Gary D. Schnell, and Robert Black, Factor analysis of fish distribution patterns in western and central Oklahoma, 202–218
Stochastic simulation and evolution of morphology—towards a nomothetic paleontology, David M. Raup and Stephen Jay Gould, 305–322
Stoneroller, 205
Stromberg, Paul C., and John L. Crites, Specialization, body volume, and geographical distribution of Camallanidae (Nematoda), 189–201
Strombidium, 103
Strophitus undulatus, 169
Struthionidae, 83, 84, 86
Struthioniformes, 84
Stygnomma spinifera, 224
Stylonychia, 103, 109
Suggested concepts for improving taxonomic dialogue, some, Sydney Anderson, 58–70
Sundasciurus, 12, 18–21
hippurus, 14, 16, 18, 21
philippinensis, 14, 16, 18, 21
Sunfish,
green, 205, 209
longear, 205
orangespotted, 205
redear, 205
Sympetrum, 48
Syngenic ascertainment in *Paramecium aurelia*, Michael A. Gates, Elizabeth E. Powelson, and Jacques Berger, 482–489
Syntheosciurus, 20
Systematic value of electrophoretic data, John C. Avise, 465–481
Systematics, 536–544
ciliate, 91–138
Szerlip, Sigurd L., review by, 149–150

Tamias, 18
striatus, 14, 16, 19
Tamiasciurus, 12, 13, 18, 20
douglasii, 14, 16
hudsonicus, 14, 16
Tamiops, 12, 18–21
mcclellandi, 14
Taricha, 468, 471
torosa, 470
Tasch, Paul, Paleobiology of the invertebrates (rev.), 459–460
Taxonomic status of wild *Canis* in Arkansas, the, Philip S. Gipson, John A. Sealander, and James E. Dunn, 1–11
Taxonomy,
numerical, 239–247, 363–386, 427–428
Teachella, 330
Tealliocaridae, 324, 330
Tealliocaris, 324
loudensis, 329
Tectarius muricatus, 521
Telebasis, 45
salva, 43
Telokinetal, 130
Terms for highly similar species, Gochfeld, Michael, 445–446
Tetrahymena, 93, 101, 109, 110, 112, 118, 129, 130
Teutophrys, 101
Thaeler, Charles S., Jr., Four contacts between ranges of different chromosome forms of the *Thomomys talpoides* complex (Rodentia: Geomyidae), 343–354
Thomomys, 471
bottae, 352
talpoides, 343–354
townsendii, 352
umbrinus, 352
Tinamidae, 83, 84
Tinamiformes, 84
Tintinnopsis, 103
Tintinnus, 103
Topminnow,
blackstripe, 205
Trachelius, 101
Trachelonema oligostriata, 125
Tracheloraphis
kahli, 125
margaritatus, 125
phoenicopterus, 124
Tramea, 48
Trends, priorities, and needs in systematic and evolutionary biology, Anonymous, 416–439
Trichodina, 101
Trichophrya, 118
Troglodytella, 101

Typhlatya, 268, 275, 276
galapagensis, 275
garciai, 275
monae, 275
pearsei, 275
Tyrannidae, 445

Ultrastructure of the chorion in very closely related *Drosophila* species endemic to Hawaii, Michael P. Kambysellis, 507–512
Unionidae, 169
Uniquely evolved character concept and its cladistic application, the, Walter J. LeQuesne, 513–517
Urocentrum, 101
Uroderma bilobatum, 26
Urostyla, 103
Uta stansburiana, 394, 471

Vampyressa pusilla, 26
Variation,
karyotypic, 333–342
protein, 226–238
Venezuela, 257–264
Vorticella, 97, 101
Vulpes
fulva, 8
macrotis, 8

Warmouth, 205
Whale,
Greenland, 253
white, 253
Williamsonia, 48
Wolves, 1–11
Woodruff, David S., see Gould, Stephen Jay, —

Xenopus, 191

Yang, Suh Yung, Michael Soulé, and George C. Gorman, *Anolis* lizards of the eastern Caribbean: A case study in evolution. I. Genetic relationships, phylogeny, and colonization sequence of the *roquet* group, 387–399

Zeylanema, 190, 191, 195, 196, 199, 200
Zoogeography, 157–164, 189–201, 202–218, 248–256, 257–264, 440–445
Zoothamnium, 97